

Stroke Deaths Among San Bernardino County Residents: A Statistical Fact Sheet

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For purposes of this fact sheet, the ICD-10 Codes for *cerebrovascular disease (stroke)* are I60-I69.

About Stroke

According to the Centers for Disease Control and Prevention, stroke is the third leading cause of death after heart disease and cancer and a leading cause of serious, long-term disability in the United States. In 2002, stroke killed 162,672 people (61% of them women), accounting for about 1 of every 15 deaths. The death rate was 56 per 100,000 population¹.

Stroke death rates in the U.S. are substantially higher for African Americans than for Whites (2002 rates per 100,000 population: 82 for Black men, 72 for Black women, 54 for White men, and 53 for White women). For other racial and ethnic groups, 2002 stroke death rates per 100,000 population were 48 for Asians/Pacific Islanders, 41 for Hispanics, and 37 for American Indians/Alaska Natives¹.

According to the American Stroke Association, extensive clinical and statistical studies have identified several factors that increase the risk of stroke². These risk factors include:

- high blood pressure
 - tobacco use
 - diabetes mellitus
 - carotid or other artery disease
 - atrial fibrillation (a heart rhythm disorder)
 - transient ischemic attacks (TIAs) ("warning strokes" that produce stroke-like symptoms but no lasting damage)
 - high blood cholesterol
 - physical inactivity and obesity
 - excessive alcohol (drinking an average of more than one alcoholic drink a day for women or more than two drinks a day for men)
 - some illegal drugs
 - increasing age
 - male gender
 - heredity
 - having had a prior stroke or heart attack
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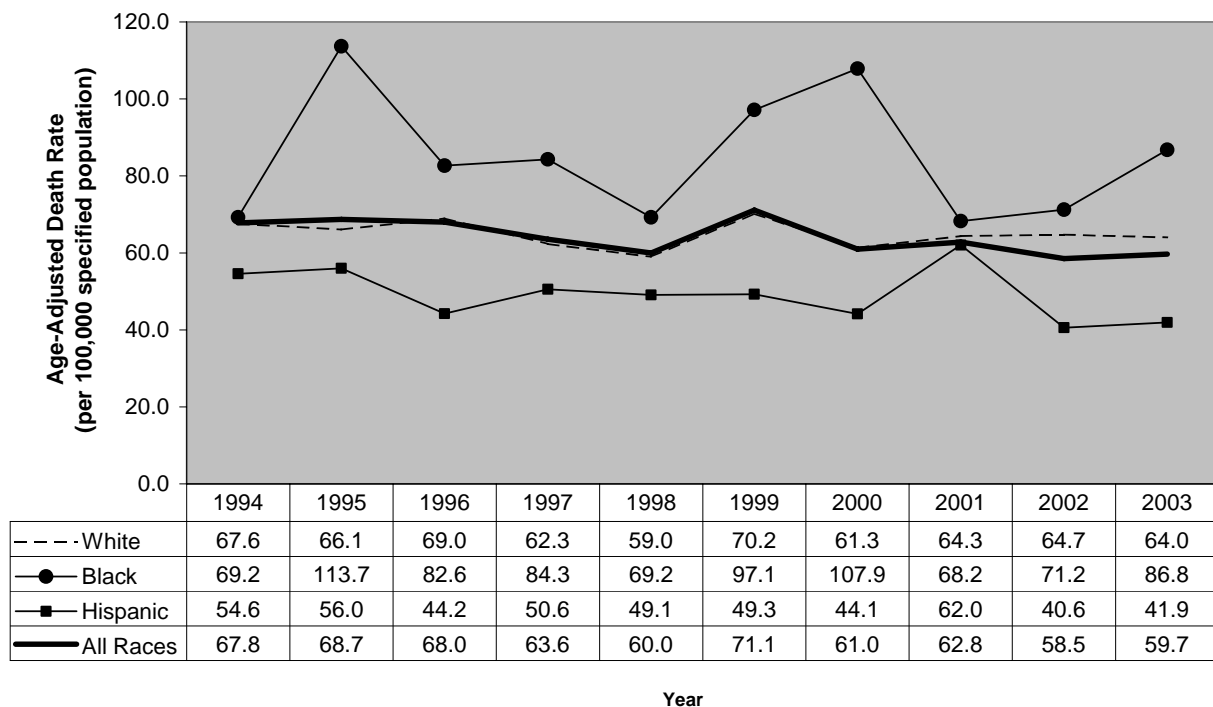
Death Rates by Race/Ethnicity

Black residents had the highest death rates due to stroke than other racial/ethnic groups in San Bernardino County from 1994 to 2003. From 1994 to 1995, there was a 64.3% increase in the death rate among Blacks, compared to a 2.2% decrease among Whites and a 2.6% increase among Hispanic residents. However, from 1995 to 1996, Black residents experienced a 27.4% decrease in death rates.

Although White residents experienced a steady trend in death rates from 2001 to 2003, the rates among Black residents increased by 27.3% and the rates among Hispanic residents decreased by 32.4%.

Overall, there was an 11.9% decrease in stroke death rates among all residents in San Bernardino County in 2003 compared to 1994. White residents experienced a 5.3% decrease in death rates, Black residents experienced a 25.4% increase in death rates, and Hispanic residents experienced a 23.3% decrease in death rates. These statistics illustrate that Black residents in San Bernardino County died from stroke at a much higher rate than other racial/ethnic groups in the county during this 10-year period.

**Stroke Death Rates by Race/Ethnicity
San Bernardino County Residents, 1994-2003**



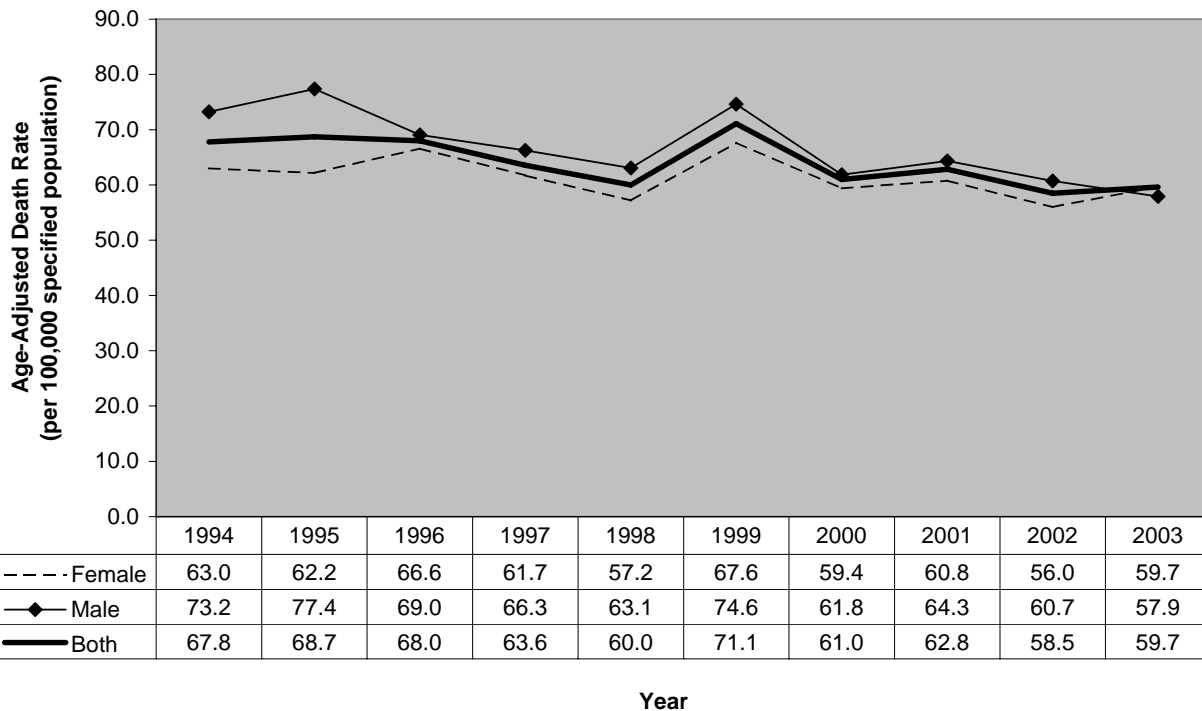
Sources: (1) California Department of Health Services, Death Files.
(2) California Department of Finance, *Race/Ethnic Population with Age Sex Detail, 2000-2050*, May 2004.

Death Rates by Gender

From the years 1994 through 2002, male residents in San Bernardino County consistently had higher death rates due to stroke than female residents. However, in 2003, the death rate among females was 3.1% higher than the death rate among males.

Although the stroke death rate among female residents increased by 7.1% from 1995-1996, the death rates for males and females declined over the 10-year period (1994 through 2003). In comparing the years 2003 and 1994, female residents had a 5.2% decrease in death rates, and male residents had a 20.9% decrease in death rates.

**Stroke Death Rates by Gender
San Bernardino County Residents, 1994-2003**

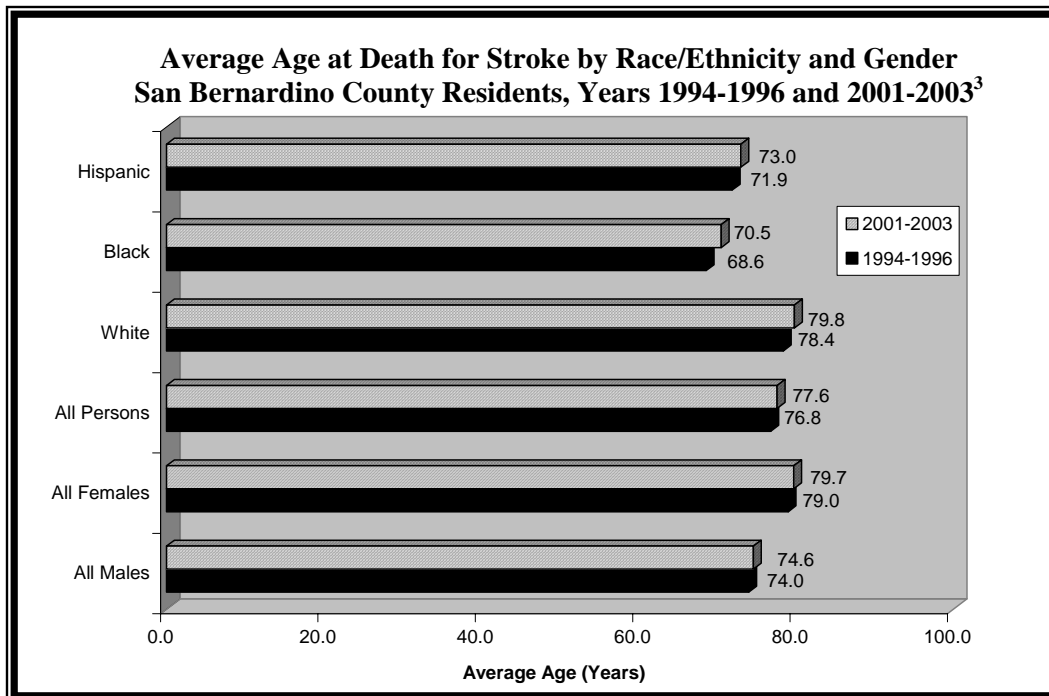
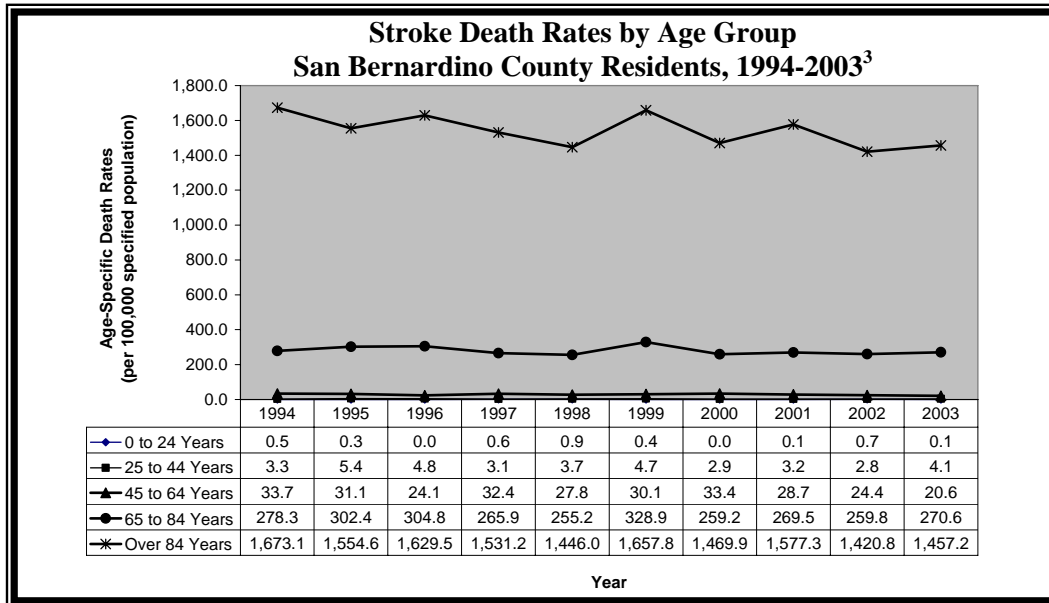


Sources: (1) California Department of Health Services, Death Files.
(2) California Department of Finance, *Race/Ethnic Population with Age Sex Detail, 2000-2050*, May 2004.

Death Rates by Age Group and Average Age at Death

Residents over the age of 84 years consistently experienced substantially higher death rates due to stroke than other age groups in San Bernardino County from 1994 to 2003. However, almost all age groups had decreased death rates over the 10-year period.

On the average, Black residents died nine years younger due to stroke than White residents and 2.5 years younger than Hispanic residents during the three-year period 2001-2003. Also, males died five years younger than females during the same time period.



³Data Sources:

(1) California Department of Health Services, Death Files.

(2) California Department of Finance, *Race/Ethnic Population with Age Sex Detail, 2000-2050*, May 2004.

Geographic Distribution

From 1994 to 2003, the highest number of deaths due to stroke was among San Bernardino County residents who lived in ZIP code 92404 (San Bernardino City). Of the 6,703 deaths due to stroke over the ten-year period, 5.8% of them were among residents who lived in this ZIP code.

Although 5.8% of all the stroke deaths during this ten-year time period were among residents in ZIP code 92404 (San Bernardino City), residents in this same ZIP code represented 4.7% of deaths due to all causes during this time period. This difference was more evident in ZIP code 92399 (Yucaipa City), where these residents accounted for 5.7% of all stroke deaths and 4.5% of deaths from all causes.

These geographic statistics regarding stroke deaths are applicable to the specified ZIP code level, not necessarily the city level. This is due to the fact that many cities encompass more than one ZIP code. Therefore, conclusions regarding a particular ZIP code may not be the same conclusions about the entire city. For example, just because residents living in ZIP code 92404 accounted for the highest percentage of stroke deaths does not mean that San Bernardino City, as a whole, accounted for the highest percentage of stroke deaths.

ZIP Codes With Most Stroke Deaths as Compared to All Deaths San Bernardino County Residents, 1994-2003

ZIP Code	City Location	Number of Stroke Deaths	Percent of Stroke Deaths	Percent of All Deaths
92404	San Bernardino	386	5.8	4.7
92399	Yucaipa	385	5.7	4.5
92392	Victorville	321	4.8	5.1
92373	Redlands	288	4.3	3.2
92335	Fontana	285	4.3	4.3
92345	Hesperia	271	4.0	4.7
92376	Rialto	262	3.9	4.0
92284	Yucca Valley	257	3.8	3.1
91786	Upland	217	3.2	3.3
91710	Chino	191	2.8	2.9
92346	Highland	189	2.8	2.7
92324	Colton	188	2.8	2.6
92307	Helendale	166	2.5	2.5
92354	Loma Linda	166	2.5	1.7
92410	San Bernardino	157	2.3	2.5
All	San Bernardino County	6,703		

Source: California Department of Health Services, Death Files.

Summary of Stroke Deaths

There were a total of 6,703 deaths among San Bernardino County residents due to stroke from the years 1994 through 2003. Even though the number of stroke deaths was higher among female residents than males, males had higher death rates for most of the ten-year period (see Technical Notes on page 7 for explanation of *age-adjusted death rate*).

White residents had higher numbers of deaths than other racial/ethnic groups, followed by Hispanic and Black residents. However, Blacks had the highest death rates during the ten-year period. Also, residents between the ages of 65 and 84 years had a higher number of deaths than other age groups, even though the death rates among residents age 85 years and older were highest.

Number of Deaths Due to Stroke By Gender, Race/Ethnicity, and Age Group San Bernardino County Residents, 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	626	649	646	611	585	726	693	731	699	737
Gender										
Female	350	352	381	357	337	417	405	425	401	441
Male	276	297	265	254	248	309	288	306	298	296
Race/Ethnicity										
White	504	498	521	468	441	545	500	519	514	506
Black	36	46	42	43	39	57	70	49	62	73
Asian/Pacific Islander	17	24	19	17	19	30	27	29	16	31
American Indian	0	0	1	1	2	2	3	2	2	5
Other/Unknown	0	0	0	0	0	0	0	0	1	0
Hispanic	69	81	63	82	84	92	93	132	104	122
Age Group										
0 to 24 Years	3	2	0	4	6	3	0	1	5	1
25 to 44 Years	16	26	23	15	18	23	15	17	15	23
45 to 64 Years	80	76	61	85	76	86	108	97	86	76
65 to 84 Years	318	346	351	309	300	387	342	363	358	384
Over 84 Years	209	199	211	198	185	227	228	253	235	253

Source: California Department of Health Services, Death Files.

Technical Notes

Age-adjusted death rate: The age-adjusted death rates presented in this fact sheet were calculated using the direct method and do not include decedents of unknown age. The rate is computed by grouping the populations into subsets by age, calculating an age-specific death rate for each group, then deriving a composite death rate by weighting each age category in proportion to its occurrence in a standard population, in this case the 2000 U.S. standard million population. Age-adjusted death rates permit the comparison of populations with disparate age structures as if the populations had similar age distributions. This means that when comparing age-adjusted rates between two or more populations, remaining differences in the rates must be explained by factors other than age. For more information about age-adjusted rates, please see the Centers for Disease Control and Prevention's definition of age-adjustment at: <http://www.cdc.gov/nchs/datawh/nchsdefs/ageadjustment.htm>.

Age-specific death rate: The age-specific death rates presented in this fact sheet were obtained by dividing the number of deaths in the specified age group by the estimated population in that specified age group and multiplying by 100,000.

$$\text{Age-specific death rate} = \frac{\text{number of deaths in an age group}}{\text{population size in same age group}} \times 100,000$$

Race/ethnicity: The following six mutually exclusive race/ethnicity groups were used to report the mortality data presented in this fact sheet: (1) White, Non-Hispanic; (2) Black, Non-Hispanic; (3) Asian/Pacific Islander, Non-Hispanic; (4) American Indian, Non-Hispanic; (5) Other/Unknown, Non-Hispanic; and (6) Hispanic. The Hispanic ethnic group includes any race. The racial/ethnic category of *Multiple Race* was not included in the analyses for this fact sheet.

Cited References

1. Centers for Disease Control and Prevention, Cardiovascular Health, *Stroke Fact Sheet: Stroke Facts in the United States, June 2005*, http://www.cdc.gov/cvh/library/fs_stroke.htm (accessed September 2005).
2. American Stroke Association, *Stroke Risk Factors*, 2005, <http://www.strokeassociation.org/presenter.jhtml?identifier=4716> (accessed September 2005).

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